

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001892**Date Inspected:** 01-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xie**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG deck panels**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present During the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG bay 1 (Gantry 2)

QA observed ZPMC qualified welding personnel perform the Gas Metal Arc Weld (GMAW) and Submerged Arc Weld (SAW) 3 Rib PMT# 1 for deck panels DP-355-001 and DP-328-001 on gantry #2. ZPMC welding personnel commenced welding PMT #1 for gantry 2 at 0900 hrs for the above mentioned deck panels. QC visually inspected and rejected this PMT panel. Weld W4 exhibited incomplete fusion in excess of what the contract documents allow. ZPMC elected to run one additional PMT which is not in compliance with the test procedure and the contract documents which requires two additional PMT panels be tested consecutively. A Caltrans incident report is forth coming. Details of the second PMT are as follows.

QA observed ZPMC qualified welding personnel perform the Gas Metal Arc Weld (GMAW) and Submerged Arc Weld (SAW) 3 Rib PMT# 2 for deck panels DP-355-001 and DP-328-001 on gantry #2. ZPMC welding personnel commenced welding PMT #2 for gantry 2 at 1041 hrs for the above mentioned deck panels. QA and QC visually inspected and accepted 500mm segments of each weld on this PMT panel. ZPMC's QC Ultrasonic Testing (UT) technician ultrasonically inspected and accepted the same 500mm segments of each weld. QA completed a U-Ribs PMT inspection report for this date and gantry. The report is on file in the Caltrans QA office. The welding parameters and welder ID's for Gantry 2 PMT #2 are as follows:

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

GMAW

Volts: 29.7 – 30.9 Amps: 355 – 380 Travel speed: 540mmpm

SAW

Volts: 24 – 25.5 Amps: 675 – 689 Travel speed: 510mmpm

Welder ID#'s

Weld joint 1: 059443

Weld joint 2: 059355

Weld joint 3: 062265

Weld joint 4: 059361

Weld joint 5: 059403

Weld joint 6: 059416

After the completion of PMT 2 QA observed ZPMC qualified welding personnel perform the GMAW welds joining the closed U-Ribs to deck panel DP-355-001. QA observed 4 ZPMC QC inspectors in the vicinity of the welding operations including ZPMC CWI identified as Chen Xie. There were also 4 American Bridge/Fluor (ABF) inspectors in the area as well. QA and ABF QC inspectors performed a random visual inspection of the GMAW root welds on this panel. ZPMC was not observed performing VT on the root welds. All welds appeared to meet the requirements of the contract documents. QA and QC monitored the welding process continuously throughout the day. QA's shift ended before ZPMC performed the SAW welds on the above mentioned panel. QA partially completed a production panel welding report for the above mentioned panel. The report is on file in the Caltrans QA office. The welding parameters as measured with the calibrated gages on the machines appeared to be in conformance with the posted WPS's and are as follows:

GMAW

Volts: 30.1 – 30.9 Amps: 367 – 381 Travel Speed: 540 mmpm



Summary of Conversations:

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

No significant conversations took place today concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowery (858)-344-2712, who represents the Office of Structural Materials for your project.

Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
